
LNG IMPORT PROJECTS: FERC REVIEW PROCESS



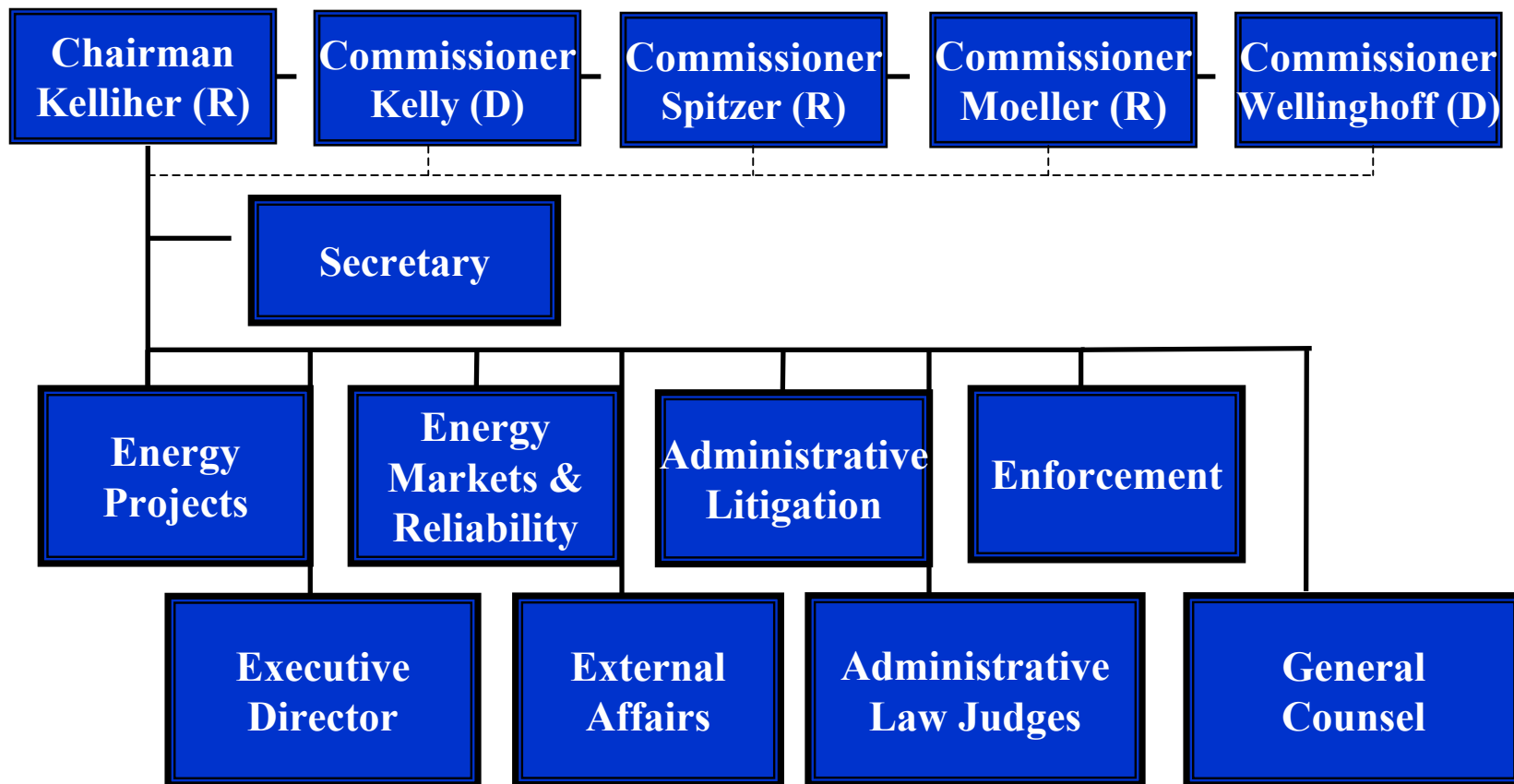
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LNG Engineering Branch
Federal Energy Regulatory
Commission

October 18, 2006

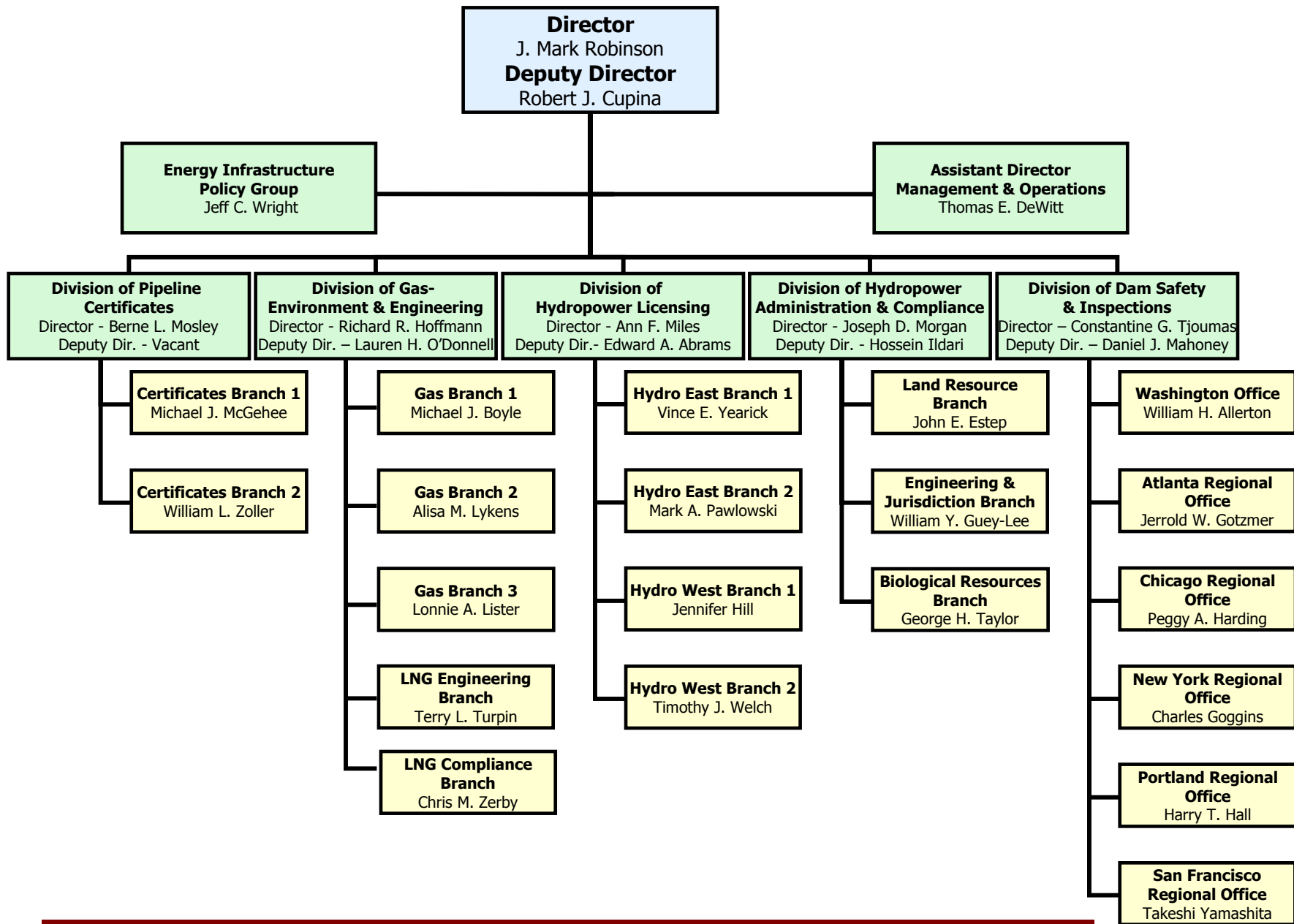


Overview

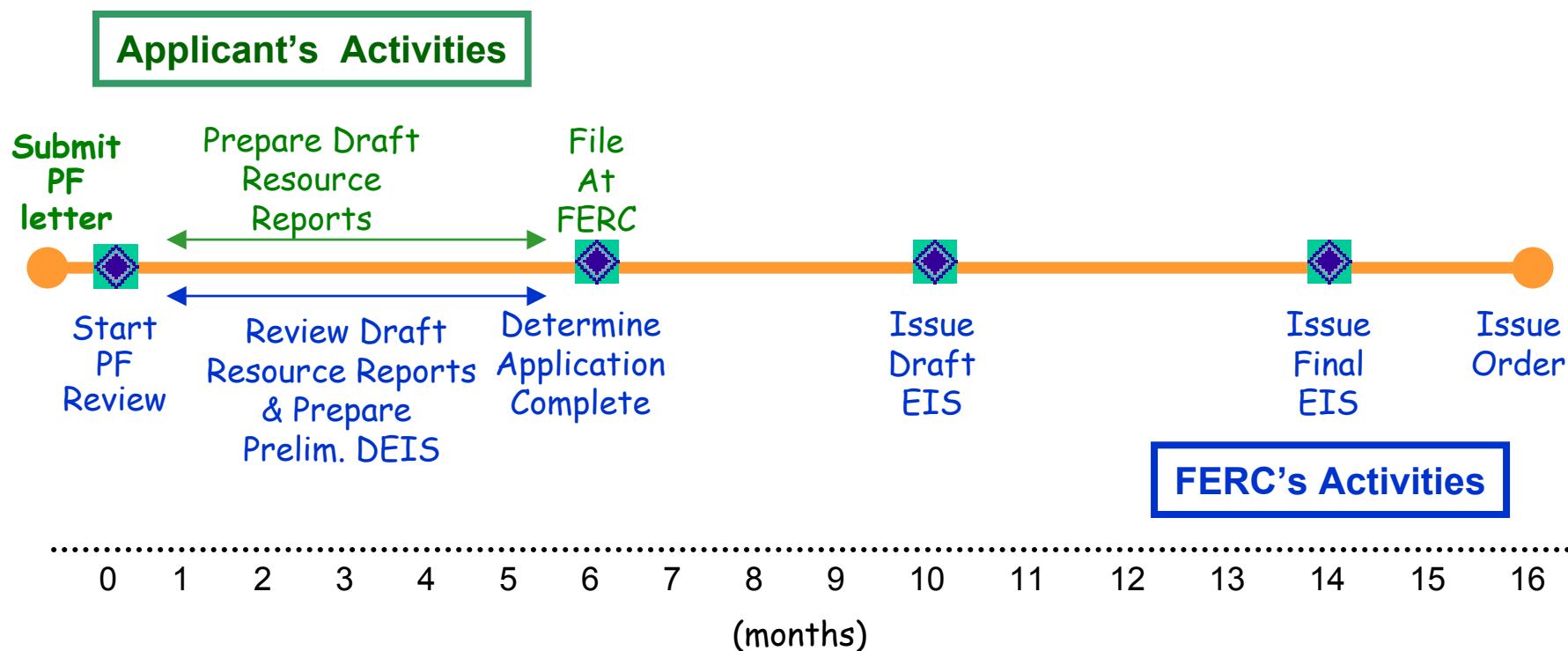
- FERC Organizational Structure
- LNG Project Review Process
- Engineering Design Review
- Exclusion Zones
- Emergency Response Plan
- Cost-Sharing Plan
- Safety & Security Coordination with States



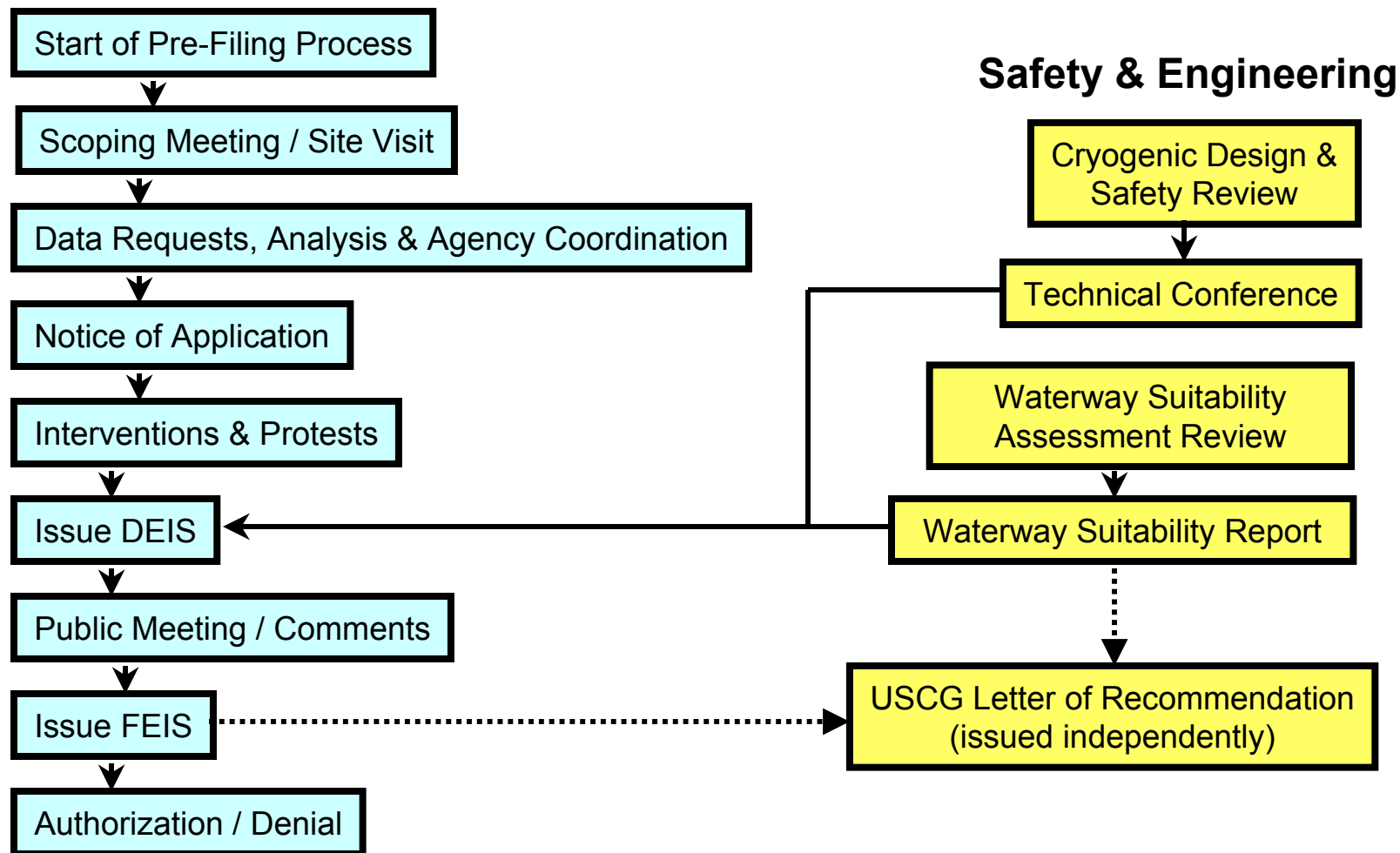
OEP Organizational Structure



Timeline for LNG Project Review Process



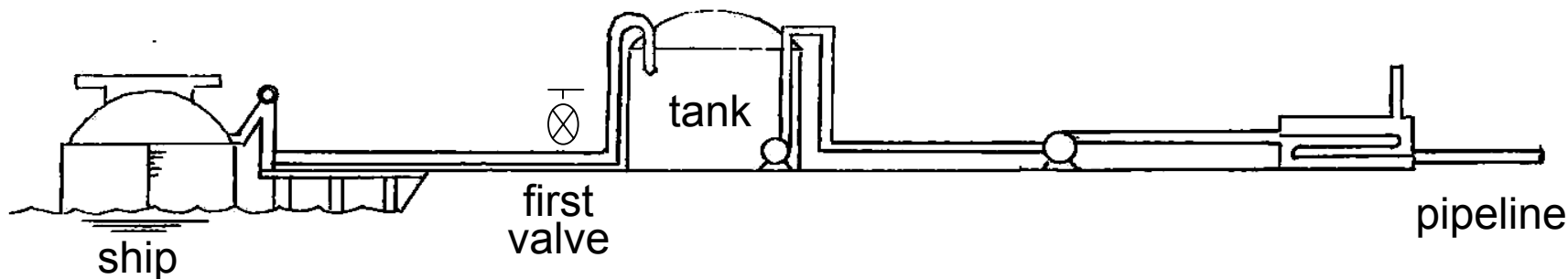
LNG Project Review Process





Multi-Agency Jurisdiction

Interagency Agreement of February 2004 ensures integrated and concurrent review



FERC – Section 3 of the Natural Gas Act

FERC – Lead Agency for Environmental Impact Statement

USCG – 33 CFR Part 127

DOT – 49 CFR Part 193 Safety Standards

USCG – 33 CFR Part 105 Facility Security

FERC Staff's Engineering Review



Onshore Facility Review

- Cryogenic Design and Technical Review – Report 13
- Safety systems – detection and control
- Exclusion Zones – Thermal Radiation and Flammable Vapor
- Compliance with 49 CFR Part 193 and NFPA 59A

Marine Safety Review

- Coordination w/ Coast Guard
- Cargo spill hazard analysis





Cryogenic Design Review

- Marine Facilities
 - LNG Pumps
 - LNG Vaporizers
 - Compressors & Blowers
 - Process Vessels
 - Process Piping Systems
 - Instrument Pneumatic System
 - Instrumentation & Controls
- Fuel Gas System
 - Storage Tanks
 - Electrical Systems
 - Seismic design review
 - Operational reliability
 - Training, Operation & Emergency Procedures
 - Compliance with DOT & NFPA safety requirements



Exclusion Zones

- Title 49, CFR, Part 193: *Federal Safety Standards for LNG Facilities* establish siting criteria in terms of exclusion zones.
 - Sec. 193.2057 Thermal radiation protection
 - Sec. 193.2059 Flammable vapor-gas dispersion protection.
- Require that each LNG container and LNG transfer system must have a thermal and flammable vapor dispersion exclusion zone.
- Zones are calculated for design spills established by NFPA 59A: *Standard for the Production, Storage, and Handling of LNG*.

Thermal Radiation Exclusion Zones



LNG Storage Tank

<u>Incident Flux (Btu/ft² hr)</u>	<u>Exclusion Area</u>
1,600	Outdoor assembly area occupied by 50 or more people.
3,000	Offsite structures used for occupancies or residences.
10,000	Property line that can be built upon.

Vaporization, Process, or LNG transfer areas

<u>Incident Flux (Btu/ft² hr)</u>	<u>Exclusion Area</u>
1,600	Property line that can be built upon.

Vapor Dispersion Exclusion Zones



- Part 193.2059 requires that provisions be made to minimize the possibility of flammable vapors from a design spill from reaching a property line that can be built upon.
- Calculations are done to 2.5 percent average gas concentration (one half the lower flammability limit of LNG vapor).

Marine Traffic and Vessel Safety



- Compliance with 33 CFR Part 127
- Letter of Intent to initiate U.S. Coast Guard Letter of Recommendation
- June 2005 NVIC / WSA
- Marine Safety Analysis – Thermal Radiation and Flammable Vapor Hazards
- Vessel Traffic Congestion



Emergency Response Plan



- To be developed in coordination with the Coast Guard, state, county, and local emergency planning groups, fire departments, state and local law enforcement, and appropriate Federal agencies.
- Must include
 - designated contacts with state and local emergency response agencies;
 - procedures for notification of local officials and emergency response agencies;
 - procedures for notifying residents and recreational users within areas of potential hazard;
 - evacuation routes for residents and other public use areas that are within any transient hazard areas along the route of the LNG vessel transit;
 - locations of permanent sirens and other warning devices; and
 - an “emergency coordinator” on each LNG vessel to activate sirens and other warning devices.
- Must include a Cost-Sharing Plan
- The ERP must be approved by FERC prior to any final approval to begin construction



Cost-Sharing Plan

- Identifies mechanisms for funding all project-specific security/emergency management costs that may be imposed on state and local agencies
- The Cost-Sharing Plan (as part of the ERP) must be approved by FERC prior to any final approval to begin construction

Safety & Security Coordination with States



- Governor designates an agency to consult with FERC about state and local safety considerations
- The designated agency may file an advisory report within 30 days of filing of application
- Project Sponsor's Emergency Response Plan must involve state and local agencies



How to Comment

Please send an original and two copies of your comment letter to:

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First St., N.E., Room 1A
Washington, DC 20426

Reference **Docket No. PF06-22-000** on the original and both copies, and label one copy of your comments for the attention of the **Gas Branch 2, DG2E**.

Comments may also be submitted electronically to the FERC via the Internet on the FERC's website. See the instructions at <http://www.ferc.gov> under the "e-Filing" link.

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